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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/891,194   | 06/26/2001  | Jong Hyun Kim        | 04805.0176-04       | 9945             |
| 22852  | 7590        | 11/05/2003           | EXAMINER            |                  |
| FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER<br>LLP<br>1300 I STREET, NW<br>WASHINGTON, DC 20005 |             |                      | NGUYEN, DUNG T      |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2871                |                  |

DATE MAILED: 11/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/891,194

Applicant(s)

KIM ET AL.

Examiner

Dung Nguyen

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 9 and 59 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9 and 59 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

Applicants' amendment dated 07/21/2003 has been received and entered.

Claims 9 and 59 are currently pending in the application.

***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 9 and 59 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants' admitted prior art, Schadt et al., Jpn. J. Appl. Phys, Vol. 31, Part 1, No 7, pp 2155-2164, July 1992, as stated in the previous office action.

Regarding claims 9 and 59, Schadt et al. disclose a method of manufacturing a liquid crystal display comprising the steps of:

. providing a first alignment layer on a first substrate and rubbing the first alignment layer (conventional alignment layer in graphs a and A of figure 9);

. providing a second alignment layer on a second substrate and exposing the second alignment layer to unpolarized UV light (pp 2157, line 14 and graphs b and B of figure 9).

Although Schadt et al. do not disclose the step of exposing the second alignment layer to UV light in oblique direction, it would have been obvious to one of ordinary skill in the art to expose an alignment layer to light in oblique direction, such as Schadt et al. figure 2, since it is notoriously well known in the art to form pretilt angles with different directions on such alignment layer.

Art Unit: 2871

### ***Double Patenting***

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 9 and 59 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 3 of U.S. Patent No. 6,091,471 and claims 9 of US Patent No. 6,295,111, as stated in the previous office action.

### ***Response to Arguments***

5. Applicant's arguments filed 07/21/2003 have been fully considered but they are not persuasive:

Applicants' arguments are as follow:

- a. There is no disclosure or suggestion in Schadt of "rubbing said first alignment layer has a first pretilt angle associated therewith" or "exposing said second alignment layer to light in an oblique direction, such that said second alignment layer includes a pretilt angle and a pretilt direction" (paragraph bridging pages 4-5).
- b. The Examiner has not cited any art to support the obvious statement (page 5).
- c. The Examiner provides no motivation to modify the Schadt (page 5).

- d. Applicants have concurrently filed Terminal Disclaimers, which address any double patenting concern (page 6)

The Examiner's responses to Applicants' arguments are as follow:

- a. The Examiner respectfully disagrees with Applicants' viewpoint and respectfully invited the Applicants to review the Schadt et al. article in which Schadt et al. clearly disclose a method of manufacturing an LCD comprising the step of :

*. providing first alignment layer (conventional aligning layer in graph A, a) on a first substrate (noted: alignment layer, according to an LCD, inherently forming on a substrate);*  
*. rubbing (e.g. buffing, brushing, see Introduction and Conventional Alignment of Liquid Crystals and/or page 2158, line 32) the first alignment layer such that said first alignment layer has a first pretilt angle associated therewith (purpose of rubbing alignment layer)*  
*. providing a second alignment layer (linearly photo polymerized aligning -LPP alignment layer in graph A, a) on a second substrate;*  
*. exposing the second alignment layer to unpolarized light (page 2157, line 14) such that said second alignment layer includes a pretilt angle and a pretilt direction (purpose of alignment layer treatment); and*

- b. The Examiner, again, respectfully disagrees with Applicants' viewpoint. In particular, the modification to the Schadt et al. article has been established by Schadt et al. figure 2 which drawn to the different example from figure 9. In other words, the combination of example of figure 9 and figure 2 would result to the claimed invention. It should be noted that the MPEP does not disclose that the art used in the rejection must come from two different references or inventors/authors.
- c. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is

Art Unit: 2871

some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, In particular, the Schadt et al. figure 2 clearly disclose the step of exposing an alignment layer (PVMC substrate) to light (Hg lamp) in oblique direction to form a bias tilt angle (Schadt, p. 2158, left column, ¶ 4). Therefore, such modification to the Schadt would have been obvious to one skilled in the art as stated in the previous office action.

- d. Applicants stated that Terminal Disclaimers have been concurrently filed; however, such Terminal Disclaimers have not been received by the Office.

Accordingly, the rejection of claims 9 and 59 stand.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Miller (US 5,359,439), Chigrinov et al. (US 5,389,698), Gibbons et al. (US 5,817,743) disclose a process for inducing pretilt in alignment of an LCD by light.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

Art Unit: 2871


MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Nguyen whose telephone number is 703-305-0423. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 703-305-3492. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

DN  
10/29/2003



**Dung Nguyen**  
**Patent Examiner**  
**Art Unit 2871**